

At the *Ceanothus* in Virginia.

By NATHAN BANKS, East Falls Church, Virginia.

If ever there is a proposition for the adoption of an entomologist's flower, I shall vote early and often for *Ceanothus*. In June, that month of profusion of bloom, *Ceanothus* is the most attractive enchanter of insect life. Its fragrance calls and calls till around the white head of blossom there is an encircling halo of admirers such as no flower in this vicinity may boast. Bee and fly and beetle follow the enthralling odor until they rest on that bed of white. The burly bumble-bee and the handsome longicorn, the fiery wasps and sharp-clawed Scarabaeids mingle with tiny beetles, delicate crane-flies and other Diptera to feast on this bounteous hoard. The vicious robber-flies hover about, the *Phymata* lurks in the flower, and many another predaceous insect here finds an abundance of food.

Each year as the bright warm days of mid-June come around I have taken a few days from my work to gather those insects that have answered the call of *Ceanothus*. To stand 'neath the broiling sun and watch this mazy whirl of restless insect life; to hear the hum of a hundred tiny wings, mingled with the sharper buzz of certain species; to easily and stealthily push one's way through the bushes, glancing anxiously here or there for something new, with net in hand a-tremble for a lightning stroke; these are the pleasures of *Ceanothus* collecting that bear pleasant memories on many a wintry day. Those specimens bearing the little label "*Ceanothus*" will always have a charm for me unequalled by the curious structures of many a more wondrous species.

There is great variation in the class of insect visitors according to the environment of the flowers. At a patch near woodlands where there were many dead trees, a considerable variety of Longicorns were always obtainable; at another patch in an open meadow few Longicorns were ever found. Some days insects were scarce when one could not tell why, the next day they might be abundant. A cloudy or clear sky, and the amount

of wind makes a great difference in the number of bees and flies, and a high degree of humidity lessens the abundance of insects, especially flies. Yet a hot spell after a mid-day shower has several times brought out a host of species, where before the shower there were but comparatively few visitors. The Hymenoptera are usually at their best from 11 till 2, the flies are often abundant till 5 or 6, while the small crane-flies and mosquitoes occur at twilight.

In this vicinity the *Ceanothus* usually begins to bloom before the 15th of June, and commonly there is little left by the Fourth of July; but each season has its peculiarities, and the location and exposure make much difference.

The list, as one will readily see, contains an abundance of common forms, but also many species that are considered rare. Some insects recorded, doubtless just happened to be there, but others, even parasitic and phytophagous species, seem to love to be in a crowd, and were captured on various occasions although there is apparently no reason for their visiting the flowers. The greatest variety of forms is among the Hymenoptera, the beetles come next, and then the flies. Bees form the great bulk of the Hymenoptera, and several species were often present in hundreds of specimens. For the names of these and some other Hymenoptera I am much indebted to Prof. T. D. A. Cockerell, and to Messrs. Crawford, Viereck, Rohwer, Lovell, and Swenk. Mr. Schwarz has kindly determined the Coleoptera. I have not listed the Lepidoptera; they are comparatively few in numbers, although a *Thyris* was sometimes fairly common.

The insect visitors of *Ceanothus* in Illinois have been recorded by Mr. Robertson in the Botanical Gazette, vol. XX; he obtained 48 Hymenoptera, 45 Diptera, 13 Coleoptera, 4 Hemiptera, and 2 Lepidoptera, all on the flowers. Mr. Hopping has given (Entom. News, 1899, pp. 162-5) a list of the beetles found on *Ceanothus* in California, 56 species; and Mr. Morris (Can. Entom. 1909, pp. 416-417) writes of Coleoptera taken on *Ceanothus* in Canada, only a few mentioned by name. There are many isolated records in various lists, while a considerable number are to be found in Smith's List of New Jersey insects.

Of the rare and unusual species one may note in the Hemiptera *Mineus strigipes*, *Lygaeus turcicus* often confounded with *L. kalmii*; *Phymata pennsylvanica*, and *Rhinocapsus vanduzeei*.

In the Coleoptera, the *Trichodes* was quite abundant at certain patches, and has doubtless been mistaken for *T. apivorus*; *Strangalia bicolor*, more apt to be on wild roses; *Eupogonius subarmatus*, very rare here; and *Griburius scutellaris*. The most common beetle was *Chauliognathus*, but there are always hosts of the small Mordellas and *Centrinus picumnus*, *Macratria murina*, *Lappus sturmi*, *Mycterus scaber* and *Isomira sericea* were always abundant. Eleven species of Cerambycidae have been taken at one patch of flowers in less than an hour.

Of the bees the *Viereckella ceanothi* is the best find, nine specimens were taken one day. The *Anthidium* was taken but once, and usually occurs later in the season on false-indigo; *Andrena rehni* was rather common. *Philanthus gibbosus* is the most common flower-wasp; *Tachytes* is quite numerous, but difficult to capture; its sharp buzz is very characteristic. *Amophila inepta* is the most common Sphecid, *Sphex auripes* was not rare; the *Stizus nanus* was taken but once, and I had not seen it north of North Carolina. *Monedula carolina* was also taken but once and is the only specimen I have seen here. *Episyron snowi* was taken only a few times, and *Pseudagenia cupida* but once. *Ropronia* was taken but once on *Ceanothus*. The most choice Ichneumonid is the delicate *Ophionellus virginiensis*; every year I have taken a few, rarely more than one a day; it hovers close to the flower and is so slender one can scarcely see it. Ants were usually abundant, especially *Camponotus* and *Formica*. The saw-fly, *Cephaleia plagiata* is a fine and uncommon species here, several were taken.

Of the flies *Odontomyia flavicornis* and *O. occipitalis* are fine catches. *Volucella obesa* was taken twice, *Milesia* was often present, and also *Xylota elongata*, this latter would usually rest on some of the interior leaves of a bush, where it was hard to sweep with the net. The rare Conopid, *Dalmannia vitiosa*, described from California, was taken twice; *Occemyia* and *Zodion fulvifrons* were abundant, *Conops brachyrhynchus*

was always to be found. Of the Tachinids, *Gymnochaeta* was taken twice, *Celatoria spinosa* but once, *Spallanzia* was perhaps the most common.

Besides these identified forms there are a few other Hymenoptera, mostly Ichneumonidae, which are unnamed, and, taken but one, may be accidental visitors.

HEMIPTERA.

THYREOCORIDAE.

Thyreocorus gillettei V. D.

" pulicaria G.

PENTATOMIDAE.

Nezara pennsylvanica D. G.

" hiliaris S.

Euchistus variolarius P. B.

Mormidea lugens F.

Mineus strigipes H. S.

Stiretrus anchorago F.

COREIDAE.

Euthoetha galeator F.

Corynocoris typhaeus F.

Chariesterus antennator F.

Alydus quinquespinosus S.

" eurinus S.

" pilosulus H. S.

Corizus nigristernum S.

PYRRHOCORIDAE.

Largus succinctus L.

LYGAEIDAE.

Lygaeus turcicus F.

" kalmii St.

Oncopeltus fasciatus H. S.

Ordanacala dorsalis S.

PHYMATIDAE.

Phymata pennsylvanica H.

REDUVIIDAE.

Sinea spinipes H. S.

Apiomerus spissipes S.

ANTHOCORIDAE.

Triphleps insidiosus S.

CAPSIDAE.

Neurocolpus nubilus S.

Calocoris rapidus S.

Plagiognathus politus Uhl.

Lopidea media S.

Resthenia insignis S.

Lygus fusconotatus Prov.

Rhinocapsus vanduzeei Uhl.

HOMOPTERA.

MEMBRACIDAE.

Stictocephala lutea F.

CERCOPIDAE.

Aphrophora parallela S.

TETTIGONIDAE.

Oncometopia undata F.

JASSIDAE.

Phlepsius irroratus S.

Deltocephalus sp.

Thamnotettix clitellaria S.

Xestocephalus sp.

Agallia quadrinotata Fh.

Bythoscopus sp.

FULGORIDAE.

Oliarces humilis St.

Liburnia ornata St.

COLEOPTERA.

CARABIDAE.

Lebia ornata S.

" scapularis D.

" viridis S.

DERMESTIDAE.

Cryptorhopalum triste L.

" haemorhoidalis L.

ELATERIDAE.

Dolopius lateralis Esch.
Corymbites inflatus S.

LAMPYRIDAE.

Pyropyga decipiens Harr.
Chauliognathus marginatus F.

CLERIDAE.

Clerus lunatus Spin.
Trichodes interruptus L.

CERAMBYCIDAE.

Purpuricenus humeralis F.
Euderces picipes F.
Acmaeops directa N.
Strangalia famelica N.
" *acuminata* O.
" *luteicornis* F.
" *bicolor* S.
Leptura cordifera O.
" *rubrica* S.
" *vagens* O.
Typocerus lugubris S.
" *lunatus* F.
" *sinuatus* N.
" *velutinus* F.
Eupogonius subarmatus L.
Oberea bimaculata O.
" *tripunctata* S.
" *schaumi* L.

CHRYSOMELIDAE.

Babia quadriguttata O.
Cryptocephalus venustus F.
" *notatus* F.
Pachybrachys trinotatus M.
" *infaustus* H.
" *tridens* M.
" *spumarius* Suff.
Bassaricus mammifer N.
Triachus atomus Suff.
Nodonota puncticollis S.
Orthaltica copalina F.
Griburius scutellaris L.

BRUCHIDAE.

Bruchus macrocerus Horn.

CISTELIDAE.

Isomira sericea S.

MELANDRYIDAE.

Mycterus scaber Hald.

OEDEMERIDAE.

Copidita thoracica F.

MORDELLIDAE.

Mordella octopunctata F.
" *scutellaris* F.
" *marginata* M.

ANTHICIDAE.

Macratia murina F.
Lappus sturmii Laf.

MELOIDAE.

Epicauta cinerea Forst.

MALACHIDAE.

Attalus pallifrons Mots.

CURCULIONIDAE.

Centrinus picumnus Hbst.

ANTHRIBIDAE.

Brachytarsus tomentosus S.

SCARABAEIDAE.

Valgus canaliculatus F.
Anomala minuta B.
Trichius piger F.

RHIPIPHORIDAE.

Rhipiphorus limbatus F.

HYMENOPTERA.

APIDAE.

Apis mellifera L.
Bombus vagans Sm.
" *americanorum* F.
Anthidium notatum L.
Heriades carinatus Cr.
Nomada perplexa Cr.
" *ceanothi* Ckll.

Nomada pygmaea Cr.
 " sp.
Viereckella ceanothi Ckll.
Anthophora abrupta S.
Macropis ciliata Pt.
Calliopsis andreniformis Sm.
 " *flavifrons* Sm.
Panurginus illinoisensis Cr.
 " *pauper* Cr.
 " *virginicus* Ckll.
Andrena cressoni Rbt.
 " *fragilis* Sm.
 " *nasoni* Rbt.
 " *obscura* Rbt.
 " *rehni* Vier.
 " *robertsoni* D. T.
 " *spireana* Rbt.
Colletes inaequalis S.
 " *latitarsis* Rbt.
 " *nudus* Rbt.
Halictus arcuatus Rbt.
 " *caeruleus* Rbt.
 " *cressoni* Rbt.
 " *forbesi* Rbt.
 " *fuscipennis* Sm.
 " *lerouxii* Lep.
 " *ligatus* S.
 " *pectoralis* Sm.
 " *provancheri* D. T.
 " *sparsus* Rbt.
 " *vierecki* Crw.
 " spp. (Two)
Augochlora banksiella Ckll.
 " *fervida* Sm.
 " *humeralis* Pt.
 " *similis* Rbt.
 " *viridula* Sm.
Agapostemon splendens Lep.
 " *virescens* F.
Prosopis modesta S.
 " *pygmaea* Cr.
 " *zizae* Rbt.
Sphecodes ranunculi Rbt.
 " *stygius* Rbt.

VESPIDAE.

Vespa carolina D.
 " *germanica* F.
 " *maculata* L.
Polistes metricus S.
 " *variatus* Cr.
 EUMENIDAE.
Monobia quadridens L.
Eumenes fraterna S.
 " *verticalis* S.
Nortonia symmorpha S.
Ancistrocerus ceanothi Roh.
 " *campestris* S.
 " *quadrisectus* S.
 " *saeculus* S.
 " *tigris* S.
 " *unifasciatus* S.
 " sp.

Odynerus conformis S.
 " *foraminatus* S.

PHILANTHIDAE.

Cerceris alaope Bks.
 " *clymene* Bks.
 " *clypeata* D.
 " *compacta* C.
 " *deserta* S.
 " *imitatoria* Schlett.
 " *robertsoni* Fx.
Philanthus gibbosus F.

CRABRONIDAE.

Oxybelus laetus S.
 " *packardi* Rbt.
 " *quadrinotatus* S.
Notoglossa emarginata S.
 " *frontalis* Rbt.
 " sp.
Anacrabro ocellatus S.
Crabro bigeminus P.
 " *brunneipes* P.
 " *chrysarginus* Lep.
 " *interruptus* Lep.
 " *tumidus* P.
 " sp.

Trypoxylon clavatum S.

NYSSONIDAE.

Gorytes flavicornis S.

Nysson subtilis Fox.

MIMESIDAE.

Mimesa pauper P.

LARRIDAE.

Tachytes harpax Pt.

Tachysphex acuta Pt.

" *terminata* Sm.

BEMBECIDAE.

Bembidula ventralis S.

Monedula carolina F.

" *pictifrons* Sm.

Stizus nanus Hdl.

SPHECIDAE.

Sphex auripes H.

Isodontia philadelphicum Lep.

Chalybion caeruleum L.

Sceliphron caementarium D.

Ammophila fragilis Sm.

" *nigricans* D.

" *procera* D.

" *inepta* Cr.

MUTILLIDAE.

Mutilla scaeva B.

Epherta scrupea S.

SCOLIIDAE.

Plesia namea F.

Elis plumipes D.

Tiphia spp.

PSAMMOCHARIDAE.

Allocoephyonyx maura Cr.

Psammochares tropicus F.

" *philadelphicus* L.

" *virginiensis* Cr.

Pompiloides cylindricus Cr.

" *marginatus* D.

Batazonus interruptus S.

Episyron biguttatus F.

" *snowi* Vier.

Pseudagenia accepta Cr.

" *cupida* Cr.

Aporinellus fasciatus Sm.

CHRYSIDAE.

Holopyga dimidiata S.

Chrysis spp.

CHALCIDAE.

Perilampus cyaneus F.

Smicra torvina S.

BRACONIDAE.

Cremnops haematodes Br.

" *semirubra* Cr.

Boethus sp.

Microdus sp.

Chelonus biannularis Cr.

Toxoneura tibiator S.

ICHNEUMONIDAE.

Trogomorpha trogiformis Cr.

Anomalon metallicum Nort.

Campoplex villosus Nort.

Joppidum apicale Cr.

Ophonellus virginiensis Cr.

Ophon bilineatum S.

Capitonus ashmeadi D. T.

Eugnomus pallidus Ashm.

Polyblastus sp.

Cryptus sp.

Cnemon sp.

Temillus sp.

Hyptia reticulata S.

Gasteruption tarsatorius S.

Ropronia garmani Ashm.

FORMICIDAE.

Cremastogaster lineolata S.

Camponotus melleus S.

Formica schauffussi M.

" *subsericea* S.

Tapinomma sessile S.

Lasius alienus F.

Monomorium minutum S.

TENTHREDINIDAE.

- Acordulecera sp.
 Eudelomyia aethiops F.
 Cephaleia plagiata Kl.
 Taxonus apicalis S.
 " terminalis S.

DIPTERA

CULICIDAE.

- Aedes canadensis Th.

TIPULIDAE.

- Geranomyia rostrata S.

STRATIOMYIDAE.

- Clitellaria subulata Loew.
 Odontomyia flavicornis O.
 " occipitalis John.
 " virgo Wied.

TABANIDAE.

- Chrysops niger Macq.
 " fallax O. S.
 " univittatus Macq.
 Tabanus melanocerus Wied.

BOMBYLIDAE.

- Exoprosopa emarginata Macq.
 Anthrax lateralis S.
 Bombylius fraudulentus John.
 " mexicanus Wied.
 " fulvibasis Macq.
 Geron senilis Fab.

ASILIDAE.

- Leptogaster pictipes L.
 Ceraturgus cruciatus S.
 Taractius octopunctatus S.
 Dasyllis thoracica F.
 " posticata S.
 Asilus sericeus S.
 " lecythus W.

DOLICHOPODIDAE.

- Psilopodinus siphos S.

SYRPHIDAE.

- Chrysogaster nitida Wied.

- Chrysogaster nigripes Loew.
 Pipiza pulchella Will.
 Paragus bicolor F.
 " angustifrons Loew.
 Chilosia tristis Loew.
 Baccha fuscipennis S.
 " babista W.
 Melanostoma mellinum L.
 Syrphus americanus Wied.
 " ribesii L.
 Allograpta obliqua S.
 Xanthogramma emarginata S.
 " flavipes Loew.
 Mesogramma geminata S.
 " marginata S.
 Sphaerophoria cylindrica S.
 Sphegina rufiventris Loew.
 Volucella obesa F.
 Eristalis transversus Wied.
 " dimidiatus Wied.
 " brousi Will.
 Syrirta pipiens L.
 Xylota bicolor Loew.
 " ejuncida S.
 " elongata Will.
 Milesia virginienis D.

CONOPIIDAE.

- Conops brachyrhynchus M.
 Physocephala tibialis S.
 Zodion abitus Ad.
 " fulvifrons S.
 " nanellum Loew.
 Stylogaster neglecta Will.
 Dalmannia vitiosa Coq.
 Occemyia abbreviata Loew.
 " loraria Loew.
 Myopa vesiculosa S.

PIPUNCULIDAE.

- Pipunculus æques Cr.
 " nigripes Loew.

TACHINIDAE.

- Gymnosoma fuliginosa D.
 Trichopoda pennipes F.

Cryptomeigenia thentis W.
Celatoria spinosa Coq.
Hypostena floridensis T.
 " sp.
Macquartia pristis W.
Leskia thecata Coq.
Leskiomera tenera Wied.
Epigrimyia floridensis T.
 " *robertsoni* T.
Distichona varia V. W.
Plagia americana V. W.
Senotaenia trilineata V. W.
Aphria ocypterata T.
Ocyptera argentea T.
 " *carolina* D.
 " *dosiades* W.
Linnæmyia compta Fall.
Gymnochæta alcedo Loew.
Exoristoides slossonæ Coq.
Exorista confinis Fall.
Masicera festinans M.
Paraphyto gillettei T.
Belpharipeza leucophrys Wied.
Winthemia quadripustulata F.
Hilarella polita T.
Spallanzia hesperidarum Will.
Trichophora ruficauda V. W.
Peleteria robusta Wied.
Archytas aterrina Desv.
Echinomyia algens Wied.

DEXIIDAE.

Dexia sp.

Thelairodes sp.
Theresia tandere Desv.
 SARCOPHAGIDAE.

Sarcophaga spp.
Helicobia helices T.

MUSCIDAE.

Pseudopyrellia cornicina F.
Pollenia rudis F.
Chrysomyia macellaria F.
Lucilia cæsar L.

ANTHOMYIDAE.

Homalomyia canicularis L.
Pegomyia fusiceps Zett.

SCIOMYZIDAE.

Tetanocera costalis Loew.

SAPROMYZIDAE.

Sapromyza glauca Coq.

ORTALIDAE.

Myrmecomyia myrmecoides Loew.
Amphicnephes pertusus Loew.
Rivellia micans Loew.
 " *pallida* Loew.
 " *quadrifasciata* M.

TRYPETIDAE.

Neaspilota achillæ John.
Euaresta bella Loew.

SEPSIDAE.

Nemopoda cylindrica F.

AGROMYZIDAE.

Milichia indecora Loew.

TOTALS.

	Species.
Hemiptera	42
Coleoptera	58
Hymenoptera	165
Diptera	117
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Total	382